ELSEVIER

Volume 565, Numbers 1–2, 28 August 1998

Journal of Organometallic Chemistry

Contents

Preface 1

Reversible coordination of the high oxidation state dioxo-acetylide fragment $(C_5Me_5)W(O)_2(CCPh)$ to a hexaruthenium cluster frame
W.-J. Chao, Y. Chi, C. Chung, A.J. Carty, E. Delgado, S.-M. Peng and G.-H. Lee 3

The unusual attachment of an alkyne across the open edge of a Rh_2Pd complex
G.R. County, R.S. Dickson and G.D. Fallon 11

Preparation and redox properties of phosphite derivatives of $R_2C_2Co_2(CO)_{6-n}[P(OMe)_3]_n$ ($R = CF_3$, MeO_2C)
N.W. Duffy, C.J. McAdam, B.H. Robinson and J. Simpson 19

Water soluble, hydrolytically stable derivatives of the antitumor drug titanocene dichloride and binding studies with nucleotides
G. Mokdsi and M.M. Harding 29

Some acetylene and hydride chemistry of group 8 metal complexes with cyclopentadienyls and their analogous ligands
G. Jia and C.P. Lau 37

Reaction of ethynediyl, butadiynediyl and ethynyl iron complexes, $(\eta^5\text{-}C_5R_5)(CO)_2Fe\text{-}(C{\equiv}C)_n\text{-}X$ [$X = Fe(\eta^5\text{-}C_5R_5)(CO)_2$, H; $R_5 = Me_5$, Me_4Et; $n = 1, 2$], with $Fe_2(CO)_9$ leading to polynuclear C_2 and C_4 complexes
M. Akita, M.-C. Chung, M. Terada, M. Miyauti, M. Tanaka and Y. Moro-oka 49

Buta-1,2,3-trienylidene, acylvinylidene and acylalkynyl ruthenium complexes via activation of alkynes with $RuCl_2(dppe)_2$. X-ray structure of *trans*-$[Ru(=C=CHCOCH_2Ph)(Cl)(dppe)_2]O_3SCF_3$
P. Haquette, D. Touchard, L. Toupet and P. Dixneuf 63

Investigation of the iron–carbon bonding for alkyl, alkynyl, carbene, vinylidene, and allenylidene complexes using ^{57}Fe Mössbauer spectroscopy
V. Guillaume, P. Thominot, F. Coat, A. Mari and C. Lapinte 75

Mixed-metal cluster chemistry IX: alkylarylphosphine derivatives of $[CpWIr_3(CO)_{11}]$ and X-ray crystal structure of $[CpWIr_3(\mu\text{-}CO)_3(CO)_7(PMe_2Ph)]$
S.M. Waterman, M.G. Humphrey and D.C.R. Hockless 81

Parallel coordination of hydrazine to diruthenium units: synthesis and molecular structure of the cationic complexes $[(\eta^6\text{-}C_6Me_6)_2Ru_2(\mu_2\text{-}H)_2(\mu_2\text{-}\eta^1,\eta^1\text{-}H_2NNH_2)]^{2+}$ and $[(\eta^6\text{-}C_6Me_6)_2Ru_2(\mu_2\text{-}H)(\mu_2\text{-}\eta^1,\eta^1\text{-}H_2NNH_2)(\mu_2\text{-}NH_2)]^{2+}$
M. Jahncke, A. Neels, H. Stoeckli-Evans and G. Süss-Fink 97

Towards linked clusters: reactions of $[Ru_6(CO)_{17}B]^-$ with dppm and [ClAu(L–L)AuCl] (L–L = bis(diphenylphosphino)-alkanes, -ethene and -ethyne, and the crystal structure of $[HRu_6(CO)_{15}(P,P'\text{-dppm})B]$ (dppm = bis(diphenylphosphino)methane)
C.E. Housecroft, A.L. Rheingold, A. Waller and G.P.A. Yap 105

Mono and difunctionalisation of chiral ferrocenyl bis-acetals. X-Ray crystal structure of bis-1,1′-[(2*S*, 4*S*)-(hydroxymethyl)-2-dioxane1,3]-ferrocene
G. Iftime, J.-C. Daran, E. Manoury and G.G.A. Balavoine 115

Orthomanganation of arylhydrazones and related *N*-donor substrates
M.B. Dinger, L. Main and B.K. Nicholson 125

$SnBrMe_3$ and dichalcogenides $(ER)_2$ as oxidants: Synthesis of platinum(IV) complexes, and C···C and C···E coupling from pallada(IV)cyclopentane complexes and $PdMe_2(EPh)\{(pz)_3BH\}$ {E = O_2C, S, Se; $[(pz)_3BH]^-$ = tris(pyrazol-1-yl)borate}
A.J. Canty and H. Jin 135

Linking of benzyne and carbon monoxide at a triruthenium centre by migratory insertion
J.P.H. Charmant, H.A.A. Dickson, N.J. Grist, S.A.R. Knox, A.G. Orpen, K. Saynor and J.M. Viñas 141

Contents

Vinylidene complexes of osmium(0) derived from 1-naphthyl- or 2-naphthyl-carbyne complexes by hydride addition to the naphthyl substituents. The crystal structure of $Os(=C=C_{10}H_8)(CO)_2(PPh_3)_2$
L.-J. Baker, C.E.F. Rickard, W.R. Roper, S.D. Woodgate and L.J. Wright 153

Silsesquioxanes: Part I: A key intermediate in the building of molecular composite materials
A. Provatas, M. Luft, J.C. Mu, A.H. White, J.G. Matisons and B.W. Skelton 159

Synthesis and reaction chemistry of mixed ligand methylpalladium–carbene complexes
D.S. McGuinness, M.J. Green, K.J. Cavell, B.W. Skelton and A.H. White 165

Use of metal carbonyls in the formation of $[H_5O_2^+ \cdot 15\text{-crown-5}][MOCl_4(H_2O)^-]$, (M = Mo, W), and a second sphere coordination complex in $[mer\text{-}CrCl_3(H_2O)_3 \cdot 15\text{-crown-5}]$
P.C. Junk and J.L. Atwood 179

Attachment of cyanometal units to the Fe_4S_4 cluster
N. Zhu, R. Appelt and H. Vahrenkamp. 187

High nuclearity ruthenium carbonyl cluster chemistry VII. Synthesis, NMR studies, electrochemistry and X-ray crystal structure of [PPN] $[Ru_8(\mu_8\text{-}P)(CO)_{22}]$
M.P. Cifuentes, S.M. Waterman, M.G. Humphrey, G.A. Heath, B.W. Skelton, A.H. White, M.P. Seneka Perera and M.L. Williams 193

Organolanthanoids XXIII complexes of tris(cyclopentadienyl)lanthanoids with tertiary phosphine oxides and the X-ray crystal structures of $[YbCp_3(OPPh_3)]$ and $[NdCp_3(OPBu^n_3)]$
G.B. Deacon, G.D. Fallon, C.M. Forsyth, B.M. Gatehouse, P.C. Junk, A. Philosof and P.A. White 201

Perspectives in syntheses, structures and bonding of acetylide-containing clusters of group 11 metals
O.M. Abu-Salah 211

Five-coordinate hydrogen in hydrido rhodium cluster compounds: A theoretical analysis
R. Gautier and J.-F. Halet 217

1,3,5-Trimethyl-1,3,5-triazacyclohexane tricarbonyl complexes of Mo and W as sources of the *fac*-$M(CO)_3$ fragment. Mild syntheses of *fac*-$[M(CO)_3(CH_3CN)_3]$ (M = Mo, W), $[W(CO)_3(PR_3)_3]$, $[W(CO)(alkyne)_3]$ and $[W(CO)_3(\pi\text{-arene})]$ complexes
M.V. Baker and M.R. North 225

A series of triisopropylstibine ruthenium and osmium complexes including the X-ray crystal structure of $[RuCl_2(CO)(Sbi Pr_3)_3]$ and $[RuCl_2(=C=C=CPh_2)(CO)(Sbi Pr_3)_2]$
H. Werner, C. Grünwald, P. Steinert, O. Gevert and J. Wolf 231

Diferrocenyltriphosphines 1: five-coordinate ruthenium complexes
I.R. Butler, U. Griesbach, P. Zanello, M. Fontani, D. Hibbs, M.B. Hursthouse and K.L.M. Abdul Malik 243

Reactions of metalloalkynes 3. Facile synthesis of pentanuclear ruthenium clusters. X-ray structures of $[Ru_5(\mu_5\text{-}C{\equiv}C)(\eta\text{-}C_5H_4R)_2(dppm)(\mu_2\text{-}CO)_2(CO)_7]$ (R = H, CH_3)
L.T. Byrne, C.S. Griffith, J.P. Hos, G.A. Koutsantonis, B.W. Skelton and A.H. White 259

Synthesis and X-ray structure of $Ru_3(CO)_6(\mu_2\text{-}CO)(\mu_2\text{-}AsPh_2)(\mu\text{-}O{=}C\text{–}C_{12}H_{17})$, a first example of a CO insertion reaction to a cluster-bound hydrocarbon
O. Shawkataly, K. Puvanesvary, H.K. Fun and K. Sivakumar. 267

Organometallic clusters: What is an appropriate DFT treatment?
M.J. Liddell 271

1,6-Bis(trimethylsilyl)hexa-1,3,5-triyne as a precursor to ruthenium clusters containing highly ethynylated ligands
P.J. Low, G.D. Enright and A.J. Carty 279

The preparation of mixed ligand ruthenocenes containing bulky cyclopentadienyl ligands. Crystal structures of pentaphenylruthenocene, $[Ru(\eta^5\text{-}C_5Ph_5)(\eta^5\text{-}C_5H_5)]$, pentaparatolylruthenocene, $[Ru\{\eta^5\text{-}C_5(p\text{-}MeC_6H_4)_5\}(\eta^5\text{-}C_5H_5)]$ and pentaphenylpentamethylruthenocene, $[Ru(\eta^5\text{-}C_5Ph_5)(\eta^5\text{-}C_5Me_5)]$
C.U. Beck, L.D. Field, T.W. Hambley, P.A. Humphrey, A.F. Masters and P. Turner 283

Author index 297
Subject index 299

The publisher encourages the submission of articles in electronic form thus saving time and avoiding rekeying errors. A leaflet describing our requirements is available from the publisher upon request.